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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-13 (cancelled)

Claim 14 (New): A process for the valorisation of metal values in a Zn-, Fe- and Pb-bearing residue, comprising the steps of:

subjecting the residue to a direct reduction step, thereby producing a metallic Fe-bearing phase and Zn- and Pb-bearing first fumes;

extracting the Zn- and Pb-bearing first fumes and valorising Zn and Pb;

subjecting the metallic Fe-bearing phase to an oxidising smelting step, thereby producing an Fe-bearing slag and second metals-bearing fumes;

extracting the second metals-bearing fumes.

Claim 15 (New): The process according to claim 14, wherein the direct reduction step of the Zn-, Fe- and Pb-bearing residue provides a metallic Fe-bearing phase comprising at least 50% of the Fe contained in the Zn-, Fe- and Pb-bearing residue.

Claim 16 (New): The process according to claim 14, wherein the direct reduction step of the Zn-, Fe- and Pb-bearing residue provides a metallic Fe-bearing phase comprising at least 90% of the Fe contained in the Zn-, Fe- and Pb-bearing residue.

Claim 17 (New): The process according to claim 14, wherein during the oxidising smelting step, Fe in the metallic Fe-bearing phase is oxidised to mainly FeO in the slag.

Claim 18 (New): The process according to claim 17, wherein in the oxidising smelting step at least 50% of the Fe in the metallic Fe-bearing phase is oxidised to FeO.

Claim 19 (New): The process according to claim 17, wherein in the oxidising smelting step at least 90% of the Fe in the metallic Fe-bearing phase is oxidised to FeO.

Claim 20 (New): The process according to claim 14, wherein the Zn-, Fe- and Pb-bearing residue is a neutral leach residue or is a weak acid leach residue.

Claim 21 (New): The process according to claim 17, wherein an acidic flux is present in the oxidising smelting step.

Claim 22 (New): The process according to claim 17, wherein a mixture of an acidic and a basic flux are present in the oxidising smelting step.

Claim 23 (New): The process according to claim 14, wherein the Zn-, Fe- and Pb-bearing residue contains Cu and Ag, and, during the oxidising smelting step, a separate Cu-alloy phase is produced containing a major part of the Cu and Ag.

Claim 24 (New): The process according to claim 14, wherein the Zn-, Fe- and Pb-bearing residue contains a Ge fraction, further comprising, after the direct reduction step, separating and forwarding the Ge fraction in the first fumes to the oxidising smelting step.

Claim 25 (New): The process according to claim 24, wherein the separation of Ge is performed by co-precipitation with Fe hydroxide or by addition of tannic acid.

Claim 26 (New): The process according to claim 14, wherein the Zn-, Fe- and Pb-bearing residue contains Ge, and, after extracting the second metals-bearing fumes, at least part of the second metals-bearing fumes metallic content is valorised.

Claim 27 (New): The process according to claim 14, wherein the first fumes are oxidised in the reactor used for the direct reduction step.

Claim 28 (New): The process according to claim 14, wherein the reactor used for the direct reduction step is a multiple hearth furnace.

Claim 29 (New): The process according to claim 14, wherein the reactor used for the oxidising smelting step is a submerged lance furnace.